

July 29, 2016

Transcontinental Gas Pipe Line Company, LLC
c/o Ms Roberta Zwier
2800 Post Oak Blvd
Level 6
Houston, TX, 77056

Re: Technical Deficiency
Atlantic Sunrise Project – Susquehanna County
APS ID# 878958, AUTH ID# 1087349
DEP Application No. E58-315
Lenox Township
Susquehanna County

Dear Ms. Zwier:

The Department of Environmental Protection (DEP) has reviewed the above referenced application package and has identified the following significant technical deficiencies. **Chapter 105 Dam Safety and Waterway Management regulations** includes information that will aid you in responding to some of the deficiencies listed below. The deficiencies are based on applicable laws and regulations, and the guidance sets forth DEP's preferred means of satisfying the applicable regulatory requirements.

As you are aware, Department staff in three different regional offices is reviewing seven other Chapter 105 permit applications associated with this project. While the regional offices have coordinated the review of the applications and the identification of deficiencies, it is possible that deficiencies raised in the Department's other deficiency letters may be applicable to this permit, even though not stated herein. The Department recommends that Williams evaluate whether any of the deficiencies identified in the other Chapter 105 permit application deficiency letters, beyond those deficiencies identified in this letter, necessitate revisions in this permit application.

Note: Due to multiple reviewers and the size of the document there may be some duplicate deficiencies although every attempt was made to eliminate duplications.

Technical Deficiencies

1. Upon further evaluation by the Department and in accordance with the 25 Pa. Code §105.13(e), complete delineation of impacts to wetlands, streams and floodways needs to be provided for the Department to perform the required environmental review of the application and make a proper permit decision. The impacts to wetlands, streams and floodways cannot be based on remote sensing. 25 Pa. Code §105.13(e)(1)(i)(A) requires a complete demarcation of the floodplains and regulated waters of this Commonwealth on

the site. This requirement will not be waived under 25 Pa. Code §105.13(k) as remote sensing or national wetland inventory data alone may not identify all wetlands, streams and floodways present, nor does it adequately identify any unique characteristics of the wetlands, or the functions that they provide. As such, the remote sensed impacts for the following wetlands: W-RS-21002, 21003, 21004, 21005, 21006, 21007, 21008, 210010, 210012, 210027, 210013, 210014, 210015, 210016, 210020, 210023, 210030, 210029 and streams: W-RS-21001, 21002, 21002A will require in field verification, and all relevant portions of the application will need to be revised prior to making a permit decision. [25 PA Code §105.13(e)]

2. Several flume crossings are shown in the ES Plan Sheets along the length of the pipeline. Clarify, with the drawings, if the flume crossing is proposed in a regulated waterway. If the crossings are located within a regulated waterway, provide a detailed impact table for the resource crossing identifying all the impacts associated with this crossing. Revise all other application documents to reflect any additional impacts. [25 PA Code §105.13(e)(1)(x)]
3. Provide adequate provisions for shut-off in the event of break or rupture. Provide locations and description of how this action will be completed in the event rupture occurs. [25 PA Code §105.301(9)]
4. Provide agency clearance letters and copies of correspondence from the Pennsylvania Fish and Boat Commission, Pennsylvania Game Commission, Pennsylvania Department of Conservation and Natural Resources, and U.S. Fish and Wildlife Service for the proposed pipeline, including no-access parcels, and the mitigation area, and identify any mitigation measures that are recommended or required. Please be advised that additional deficiencies may be generated pending responses from resource agencies. [25 PA Code §105.14(b)(4)]
5. Provide clearance or approval from the Pennsylvania Historical and Museum Commission (PHMC) for cultural, archeological, and historic resources for the proposed water obstructions and encroachments, mitigation area, and areas necessary to construct the water obstructions and encroachments. [25 PA Code §105.13(e)(1)(x), §105.14(b)(4), §105.14(b)(5)]
6. Provide plans or a detail for the restoration of stream beds at open cut stream crossings. This should include replacement of native stream bed material. This should include replacement of native stream bed material and assurance that no significant changes in bed grade occur. [25 PA Code §105.13(e)(1)(i)(G), §105.13(e)(1)(ix), §105.1, Mitigation, §105.13(e)(1)(x), §105.15(a)(1), §105.14(b)(4), §105.16(d), §105.13(e)(1)(i)(G), §105.242(c)]
7. Explain how the final “restored” wetland elevations will be determined. [§105.13(e)(1)(ix)]

8. It appears that several waters of the Commonwealth could be crossed using trenchless installation methods. Provide a revised alternatives analysis that incorporates a discussion of alternative crossing techniques (e.g., conventional bore, HDD, micro-tunneling) addressing each resource crossing individually and explaining why trenchless installation methods are not appropriate. *[25 PA Code §105.13(e)(1)(vii), §105.18a]*
9. The application states that topsoil will be segregated. Provide a revised Enclosure D of the Environmental Assessment that explains how the topsoil depth will be determined in the field. *[25 PA Code §105.15(a) §105.15(b), Environmental Assessment Form Instructions]*
10. Revise the application to provide a planting plan to re-establish woody vegetation within the temporary construction ROWs in riparian and wetland areas that are currently forested or dominated by woody species, as was previously proposed and implemented by Williams Transco on a similar project. *[25 PA Code §105.13(e)(1)(ix), §105.16(d)]*
11. The functions and values provided by shrub species more closely match those provided by forested areas than are provided by emergent areas. Revise the plans to incorporate the replanting of woody species in forested/ scrub shrub areas in the permanent ROW. *[25 PA Code §105.13(e)(1)(ix)]*
12. Several streambank stabilization methods are proposed in the Erosion and Sedimentation Control Plans. Identify where each type of stabilization measure will be utilized. *[25 PA Code §105.21(a)(1)]*
13. Revise the alternatives analysis to show the 600-foot survey corridor and demonstrate that impacts to waters of the Commonwealth within the corridor have been minimized to the maximum extent practicable. The demonstration should address each crossing individually. *[25 PA Code §105.13(e)(1)(viii), §105.18(a)]*
14. The application incorrectly identifies watercourses as “waterbodies”. Watercourses and bodies of water are defined differently under Chapter 105. Provide revised copies of all applicable documents. *[25 PA Code §105.21(a)(1)]*
15. The application states that blasting may be required to install the proposed pipeline. Clarify if blasting will be necessary in or along waters of the Commonwealth, and identify where it will be proposed. Please be advised that a blasting permit from the Pennsylvania Fish and Boat Commission may be needed. *[25 PA Code §105.21(a)(1)]*
16. An Aids to Navigation (ATON) plan may be required for this project. Contact Thomas Burrell with the Pennsylvania Fish and Boat Commission at 717.705.7838 regarding ATON requirements, and provide a copy of the ATON approval to DEP. *[25 PA Code §105.14(b)(2)]*
17. The Joint Permit Application Plans shall be the final plans for construction. Remove the

reference to "Preliminary/Draft" from all plan sheets. *[25 PA Code §105.13(e)(1)(i)(C)]*

18. Installation of trench plugs as depicted in the profile view on the E&S Control Plans is likely to result in adverse impacts to the hydrology of waters of the Commonwealth. Provide a revised detail showing the trench plug continuing to the bottom of the trench instead of the top of the bedding material. *[25 PA Code §105.18a]*
19. The application states in numerous locations that the criteria used during routing surveys included "minimizing effects at any single wetland crossing to 1 acre or less whenever practicable". The Department is unable to determine why the 1 acre threshold was utilized when Chapter 105 regulations require minimizing impacts to wetlands to the maximum extent practicable. Revise the application to demonstrate that the routings avoid and minimize wetland impacts to the maximum extent practicable. Transco should assess the applicability of this deficiency to the other counties that are part of this project. *[25 PA Code §105.13(e)(1)(vii), §105.18a]*
20. According to the Hydrologic & Hydraulic Calculations for Waterbody Crossings (H&H) several waterbody crossings are to be crossed by a dam and pump method. Many of these crossings have excessive Peak Flows that could not be managed by pumping. Detail how these crossings will be stable and how the waterbodies will be successfully passed through or around the work area. Provide tables in the plan drawings depicting pump sizing and rate information to be used by contractors. *[25 PA Code §105.161]*
21. The H&H report, Peak Flow Calculations depict culvert pipe diameter and number of culvert pipes for some crossings but not all. Some crossings state "Cross When No Storm Forecasted" in the Flume Diameter and Number of Pipes columns. Provide crossing types and sizing data for these crossings. *[25 PA Code §105.161]*
22. In reviewing the plans (profile view), trench plugs are indicated to be installed at wetland/upland interfaces. Additional trench plugs may be necessary along the length of the crossing due to length and/or slope to maintain hydrology throughout the wetland for Impact numbers 13, 31, 34, and 35. Please review and revise accordingly. Some additional guidance is available within the PA E&S Control BMP Manual. *[25 PA Code §105.13(e)]*
23. Provide a detailed site specific pollution prevention and control plan that addresses potential inadvertent returns as well as hazardous and non-hazardous chemical releases. *[25 PA Code §105.21(a)(3)]*
24. There are inconsistencies between the stream length noted between the Plan maps and the "Impact Table for Individual Permit Application". Please check all stream crossing lengths on the Plan maps with the Impact Table for Individual Permit Application for consistency. *[25 PA Code §105.13(e)(1)(i)(C), §105.13(e)(1)(iii)]*
25. Reductions of Limits of Disturbance in regulated waters could result in reduced impacts.

It is recommended that the regulated waters of the project be re-evaluated and construction limits be reduced where possible to eliminate or reduce project impacts. Provide those developed changes within the re-submission (e.g. W-T30-21001, W-T12-21009A, WW-T12-21008). [25 PA Code §105.14]

26. The stream and wetland boundaries overlap on several impact sheets. Provide revised impact sheets with the wetland and stream boundaries clearly delineated. [25 PA Code §105.13(e)(1)(i)(A)]
27. Section 6 of *Permittee Responsible Mitigation Plan* indicates that impacts to PSS wetlands are temporary because the areas will be allowed to revert to PSS wetlands. The application further states that a 10-foot ROW will be maintained as frequently as once annually. Provide documentation to support the claim that scrub shrub wetlands will establish with such frequent mowing and further clarify in the application if vegetative maintenance will involve herbicides. [25 PA Code §105.18a, §105.21(a)(1)]
28. Explain why construction ROWs in wetlands exceed the maximum width of 75 feet as recommended by FERC. [25 PA Code §105.18(a)]
29. As discussed in the April 28, 2014 response letter from the U.S. Fish & Wildlife Service, Annual Ryegrass is discouraged due to its tendency to compete with native species. Revise all applicable sections of the application to propose alternative to annual ryegrass, such as cereal oats or grain rye. [25 PA Code §105.13(e)(1)(ix)]
30. Provide plans and cross sections indicating pipe size, placement, and locations for all wetlands, streams, floodways and floodplains where the proposed water withdrawal piping is to be installed. The cross sections should depict, at a minimum, the proposed structures, resource boundaries, stream bed and banks, and water surface elevations. Provide a description and plans of how the water will be withdrawn, the methods to be utilized, what equipment and structures are proposed to be placed and utilized in waters of the Commonwealth, the length of time which obstructions will remain in place, and other details. Provide a cross sections, profiles, and hydraulic analysis for piping placed in existing stream culverts and along and within stream channels. [25 PA Code §105.13(e)(1)]
31. Each of the temporary equipment stream crossings shown on the plan view drawings reference numerous typical details for various methods that the contractor may utilize to construct the crossings. The methods include 1. Bridge Equipment Crossing (BEC); 2. Flume Stream Crossing (FX); 3. Wet Minor Waterbody Crossing (MWC); 4. Temporary Stream Crossing Multiple Pipes (TSC.2); 5. Timber Matting Air Bridge (MAT.3); 6. Wet Intermediate Waterbody Crossing (IWC); and 7. Clean Water Crossing (CWC). The Stream impacts vary for each method. Please choose a single method that is both practical and has the least impact on the stream and floodway. Revise the plans and other applicable components of the application appropriately. Please show the proposed erosion and sediment control BMPs on the Erosion and Sediment Control Plans. [25 PA

Code §105.13(g)

32. Each of the temporary equipment wetland crossings shown on the plan view drawings reference numerous typical details for various methods that the contractor may utilize to construct the crossings. The methods include 1. Timber Matting in Wetlands (MAT.1); 2. Wetland Equipment Crossing (WEC); and 3. The Wetland impacts vary for each method. Please choose a single method that is both practical and has the least impact on the wetland. Revise the plans and other applicable components of the application appropriately. *[25 PA Code §105.13(g)]*
33. Each of the utility crossings shown on the plan view drawings reference numerous typical details for various methods that the contractor may utilize to construct the crossings. The methods include 1. Cofferdam Stream Crossing (CD); 2. Dam and Pump Stream Crossing (DPX); 3. Flume Stream Crossing (FX); 4. Wet Intermediate Waterbody Crossing (IWC); 5. Wet Minor Waterbody Crossing (MWC); 6. Horizontal Directional Drill (HDD); 7. Bored Waterbody Crossing (WBX.1); 8. Unsaturated Wetland Installation Procedure (WCC.1); 9. Saturated Wetland Installation Procedure (WCC.2); and 10. Inundated Wetland Installation Procedure (WCC.3). The Stream impacts vary for each method. Please choose a single method that is both practical and has the least impact on the stream and floodway. Revise the plans and other applicable components of the application appropriately. *[25 PA Code §105.13(g)]*
34. In the table titled "Impact Table for Individual Permit Application", please revise for the following items: *[25 PA Code §105.13(e)]*
 - a. Under the column Resource Name, please include the stream Identifier, (ie. WW-T30-21001 for impact 1) for both stream and floodway impacts,
 - b. Under the column Plan sheet, there are several impacts where the plan sheet number is not provided; also, please provide the drawing number from the individual impacts plans,
 - c. Under the Waterbody crossing method, Please revise to include wetlands and reference construction detail sheet.
 - d. Why are some entries highlighted orange and others are not. Please explain.
35. In response to the comment, #1, Please revise all applicable tables, wetland delineation report/data sheets, environmental assessment discussions, tables and mitigation plans to reflect all proposed impacts. *[25 PA Code §105.13(e)]*
36. In Enclosure D, Section B4a and b, the report states "some wildlife species that rely on forested habitats may be negatively affected by the loss of forest". Please provide further discussion on these impacts and a determination if the impacts are or will be adverse. If a conclusion of the impacts is not adverse, please provide an analysis to support your

conclusions. [25 PA Code §105.14(b)(12)]

37. Please provide a revision to the environmental assessment addressing all points found at 25 PA Code §105.18a(a),(b) by providing additional information or footnoting the already provided information.
38. Revise Enclosures C&D to assess the condition of, and impacts to forested and scrub shrub riparian areas and the habitat, water quality, and other impacts on watercourses for each watercourse crossing. In general, the DEP recommends evaluating the riparian areas from the top of bank landward 100ft, and if the area utilized is less than 100ft justification should be given as to why. The application should be revised to replant the vegetation lost in both permanent and temporary ROW and workspaces. Alternatively, where it cannot be replaced and provided permanent protection, provide details on why it cannot be replaced and provide compensatory mitigation for the impacts and discuss the impacts to the watercourses in the Environmental Assessment, including water quality impacts. [25 PA Code §105.13(e)(1)(x) & §105.14(b)(4) & §105.14(b)(11) & §105.14(b)(12) & §105.14(b)(14) & §105.15a) & §105.15(a)(1) & §105.15(b) & §105.16(d) & DEP's Riparian Forest Buffer Guidance, Document # 394-5600-001]
 - a. To aid in evaluating the condition of and change in condition to watercourses and wetlands, the Department recommends utilizing the Draft Pennsylvania Riverine Condition Level 2 Rapid Assessment Protocol and the Draft Pennsylvania Wetland Condition Level 2 Rapid Assessment Protocol. This protocol is not for identifying the functions and values of the resources, but rather is utilized to assess the current and proposed conditions of the resources utilizing current environmental principles. While the Protocols are not final, based on the review of the application and expected timeframes, it is expected that these protocols will be finalized during technical review of the application. [25 PA Code §105.14(a) & §105.14(b)(4) & §105.14(b)(13) & §105.14(b)(12) & §105.15(a) & §105.15(a)(1) & §105.15(b) & §105.18a(a)(1) & §105.13(e)(1)(x)]
39. Enclosure D, Item B2d and e of the Environmental Assessment states that "the project is not expected to impact any potable water intakes or public water supplies which rely on groundwater resources." However, there is no reference to public water supplies utilizing surface water intakes. Please revise your Enclosure D to address any public water supplies impacting surface water resources. [25 PA Code §105.13(e)(1)(x)]
40. Specific to the *Permittee Responsible Mitigation Plan* [25 PA Code §105.13(e)(1)(ix), §105.20a, 105.21(a)(1)]:
 - a. Please provide a discussion on how the Permittee Responsible Mitigation Plan will establish and provide for impacted functions and values along the pipeline ROW.
 - b. While the Department understands that RES will implement and conduct monitoring and maintenance of the mitigation area on the Transcontinental Gas Pipeline Company's behalf, Williams Transco, as the permittee, will ultimately be responsible for the establishment of the mitigation area. Revise the mitigation

plan report to clearly reflect this.

You must submit a response for each of the above deficiencies. The re-submission shall be a complete standalone submission that will be used for authorization under E58-315. You may request a time extension, in writing, before **September 27, 2016** to respond to deficiencies beyond the sixty (60) calendar days. Requests for time extensions will be reviewed by DEP and considered. You will be notified in writing of the decision either to grant or deny, including a specific due date to respond if the extension is granted. Time extensions shall be in accordance with 25 Pa. Code §105.13a(b).

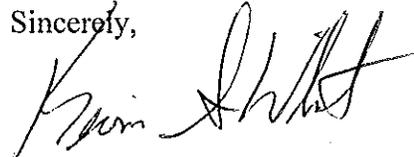
Pursuant to 25 Pa. Code §105.13a of DEP's Chapter 105 Rules and Regulations you must submit a response fully addressing each of the significant technical deficiencies set forth above. Please note that this information must be received within sixty (60) calendar days from the date of this letter, on or before **September 27, 2016** or DEP may consider the application to be withdrawn by the applicant.

If you believe that any of the stated deficiencies is not significant, instead of submitting a response to that deficiency, you have the option of asking DEP to make a decision based on the information with regard to the subject matter of that deficiency that you have already made available. If you choose this option with regard to any deficiency, you should explain and justify how your current submission satisfies that deficiency. Please keep in mind that if you fail to respond, your application may be withdrawn or denied.

Should you have any questions regarding the identified deficiencies, please call Michael Luciani, and refer to Application No. E58-315, Atlantic Sunrise to discuss your concerns or to schedule a meeting. The meeting must be scheduled within the 60-day period allotted for your reply, unless otherwise extended by DEP.

You may also follow your application through the review process via *eFACTS on the Web*
at: <http://www.ahs2.dep.state.pa.us/eFactsWeb/default.aspx>.

Sincerely,



Kevin S. White, P.E.
Environmental Group Manager
Waterways & Wetlands Program

Enclosure

cc: US Army Corps of Engineers, Baltimore District, Michael Dombroskie
US Environmental Protection Agency, Jamie Davis
Susquehanna County Conservation District
Aaron Blair, Transcontinental Pipe Line Company, LLC
John Zimmer, TRC Environmental
PA Fish & Boat Commission, Division of Environmental Services
Lenox Township